

WHAT IS CLAIMED IS:

1. A receiving apparatus of a high speed digital data communication system comprising:

a mobile station modem (MSM) for judging a modulation method according to a data rate of a received signal and a position of a data pointer;

a controller for controlling a control signal with respect to a position change of the data pointer on the basis of the information collected by the MSM; and

a demodulator for determining a position of the data pointer according to the control signal outputted from the controller and demodulating the signal.

2. The apparatus of claim 1, wherein the MSM comprises:

an analog/digital converter for converting the received signal to a digital data; and

a rate judging unit for judging a data rate of the received signal.

3. The apparatus of claim 1, wherein the controller differs the intervals between data pointers according to the data rate of the received signal.

4. The apparatus of claim 3, wherein an interval between inner data pointers and outer data pointers is greater than an interval between a center and the inner data pointers.

5. A receiving apparatus of a high speed digital data communication system comprising:

an amplifier for amplifying an inputted RF signal;

a band pass filter for removing a spurious wave component of a signal outputted from the amplifier;

a frequency mixer for mixing an output signal of the band pass filter and an output signal of a voltage control oscillator and outputting an IF signal;

a mobile station modem (MSM) for judging a data modulation method according to a rate of a received data;

a controller for generating a control signal for changing a position of a data pointer according to a data rate of a received signal; and

a demodulator for demodulating an output signal of the frequency mixer according to the control signal.

6. The apparatus of claim 5, wherein the MSM includes: a rate judging unit for judging a data rate of the received signal.

7. The apparatus of claim 5, wherein the data modulation method uses 16 QAM if the received signal is a high speed data.

8. The apparatus of claim 5, wherein the controller controls such that an interval between the inner data pointers and the outer data pointers is greater than an interval between a center and the inner data pointers.

9. A receiving method of a high speed digital data communication system comprising:

judging a data modulation method of a received signal; and

changing an interval between data pointers of the corresponding data modulation method.

10. The method of claim 9, wherein the data modulation method is varied according to a data rate of the received signal.

11. The method of claim 9, wherein an interval between the inner data pointers and the outer data pointers is greater than an interval between a center and the inner data pointers.

12. A receiving method of a high speed digital data communication system comprising:

judging a data rate of a received signal;

determining a data modulation method;

controlling a position interval of each data pointer of the corresponding data modulating method; and

changing and determining a position of a data pointer according to a control signal.

13. The method of claim 12, wherein the data modulation method uses 16 QAM method if the received signal is a high speed data.

14. The method of claim 12, wherein, in the step of controlling an interval of data pointers, the interval between the inner data pointers and the outer data pointers is greater from the position of the basic data pointer.

15. A receiving method of a high speed digital data communication system comprising:

receiving a signal of a high speed data modulation format;

controlling to change a position of an outer data pointer from a position of a basic data pointer; and

demodulating the received signal centering around a changed data pointer.

16. The method of claim 15, wherein the position of outer data pointers is changed greater in the external direction from the position of the basic data pointer.

17. A communication system comprising:

a judging device configured to judge a modulation format according to a data rate of a received signal and a data location, wherein the data location is at a predetermined distance with respect to the I/Q axis;

a controller configured to generate a control signal with respect to a position change of the data location on the basis of the modulation method and the data rate; and

a demodulator configured to determine the data location according to the control signal outputted from the controller and to demodulate the received signal.

18. The communication system of claim 17, wherein the judging device comprises a rate judging unit for judging a data rate of the received signal.

19. The communication system of claim 17, wherein the controller is configured to differ the intervals between data locations according to the data rate of the received signal.

20. The communication system of claim 19, wherein an interval between inner data locations and outer data locations is greater than an interval between a center of the I/Q axis and the inner data locations.

21. The communication system of claim 17, further comprising:

an amplifier configured to amplify an inputted signal;

a first band pass filter configured to remove a spurious wave component of a signal outputted from the amplifier;

a frequency mixer configured to mix an output signal of the band pass filter and an output signal of a voltage control oscillator and outputting an IF signal; and

a second band pass filter configured to filter a specific part of the IF signal and to output the filtered signal to the demodulator.

22. The communication system of claim 17, wherein the judging device comprises a mobile station modem (MSM).

23. The communication system of claim 22, wherein the judging device further comprises a low pass filter configured to filter the output of the demodulator.

24. The communication system of claim 17, wherein the data modulation format uses 16 QAM if the received signal is a high speed data signal.

25. The communication system of claim 17, wherein the judging device, controller and demodulator form part of a receiver.

26. The communication system of claim 17, wherein the communication system is a wireless communication system.